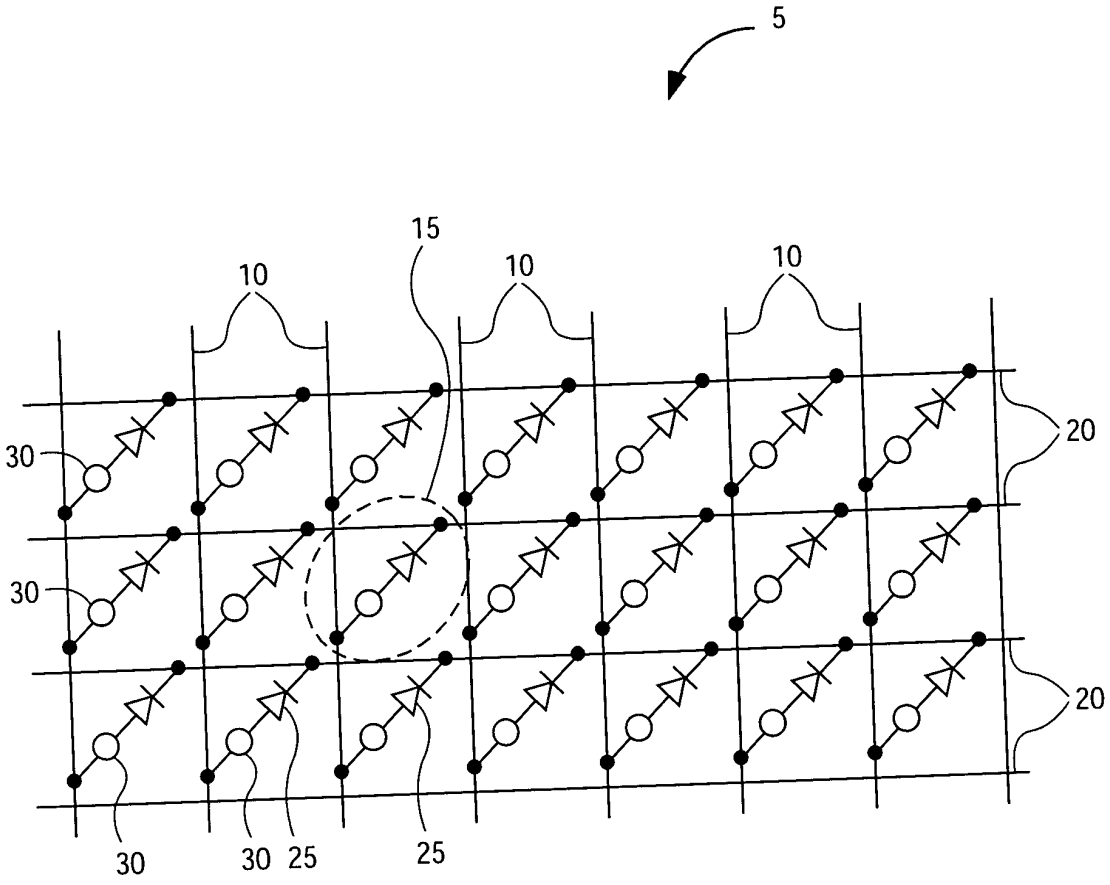

FIG. 1

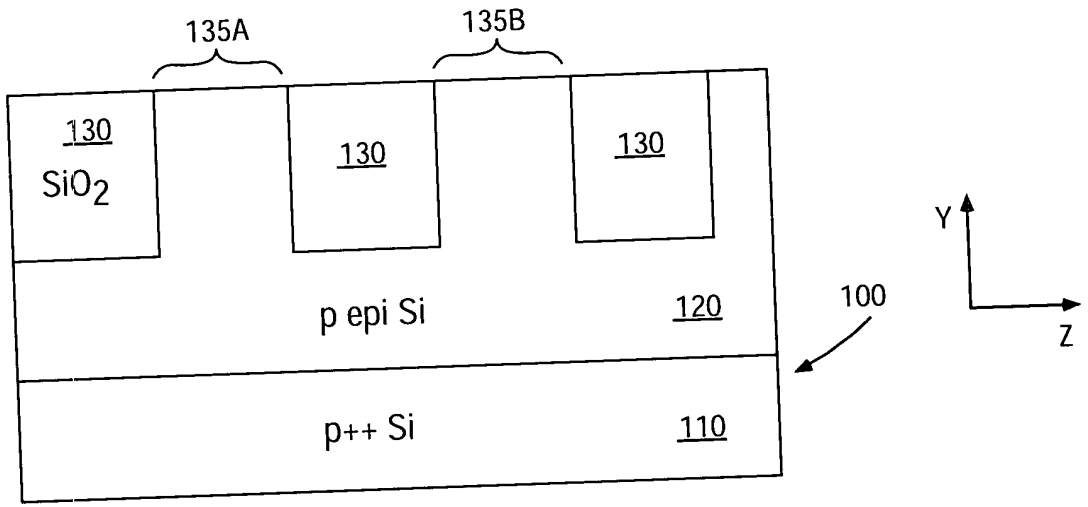

FIG. 2

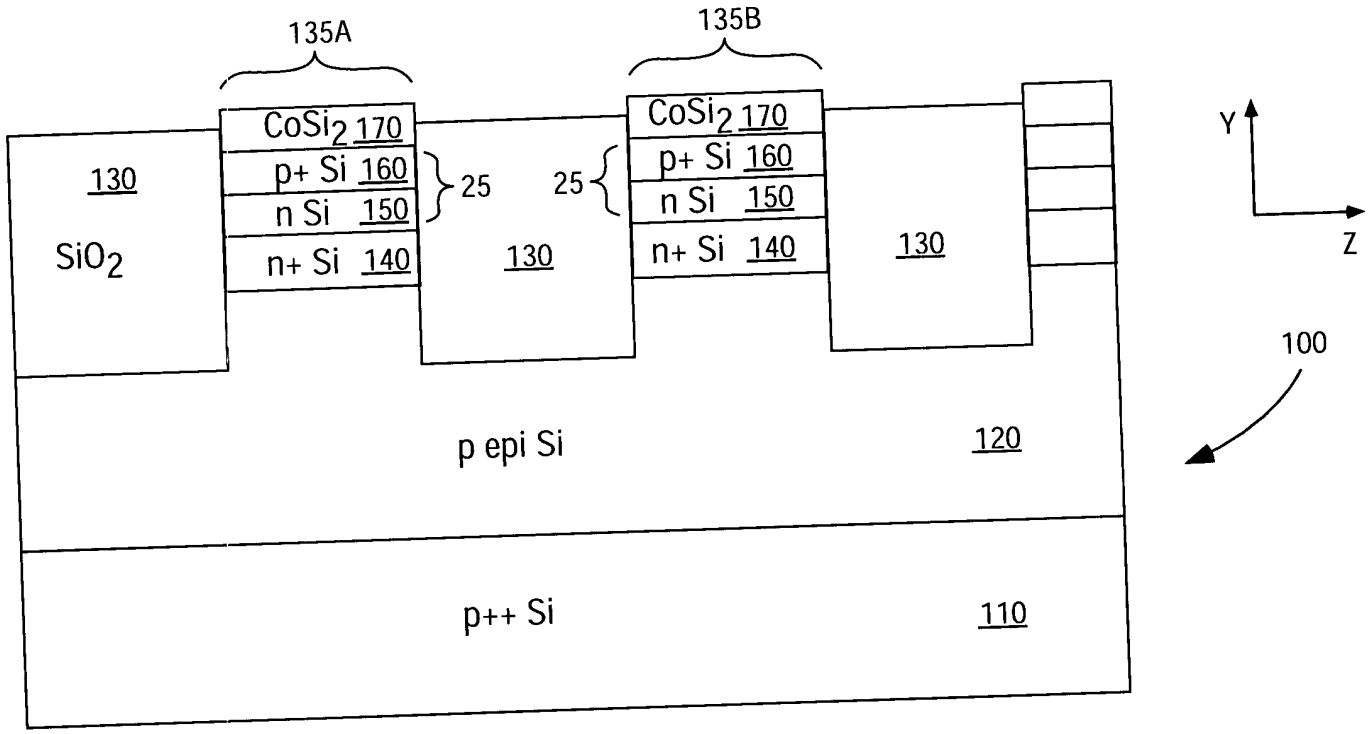
135A
135B
CoSi2 170
p+ Si 160
n Si 150
n+ Si 140
25
25
130
130
130
SiO2
p epi Si
120
p++ Si
110
100
Y
Z

FIG. 3

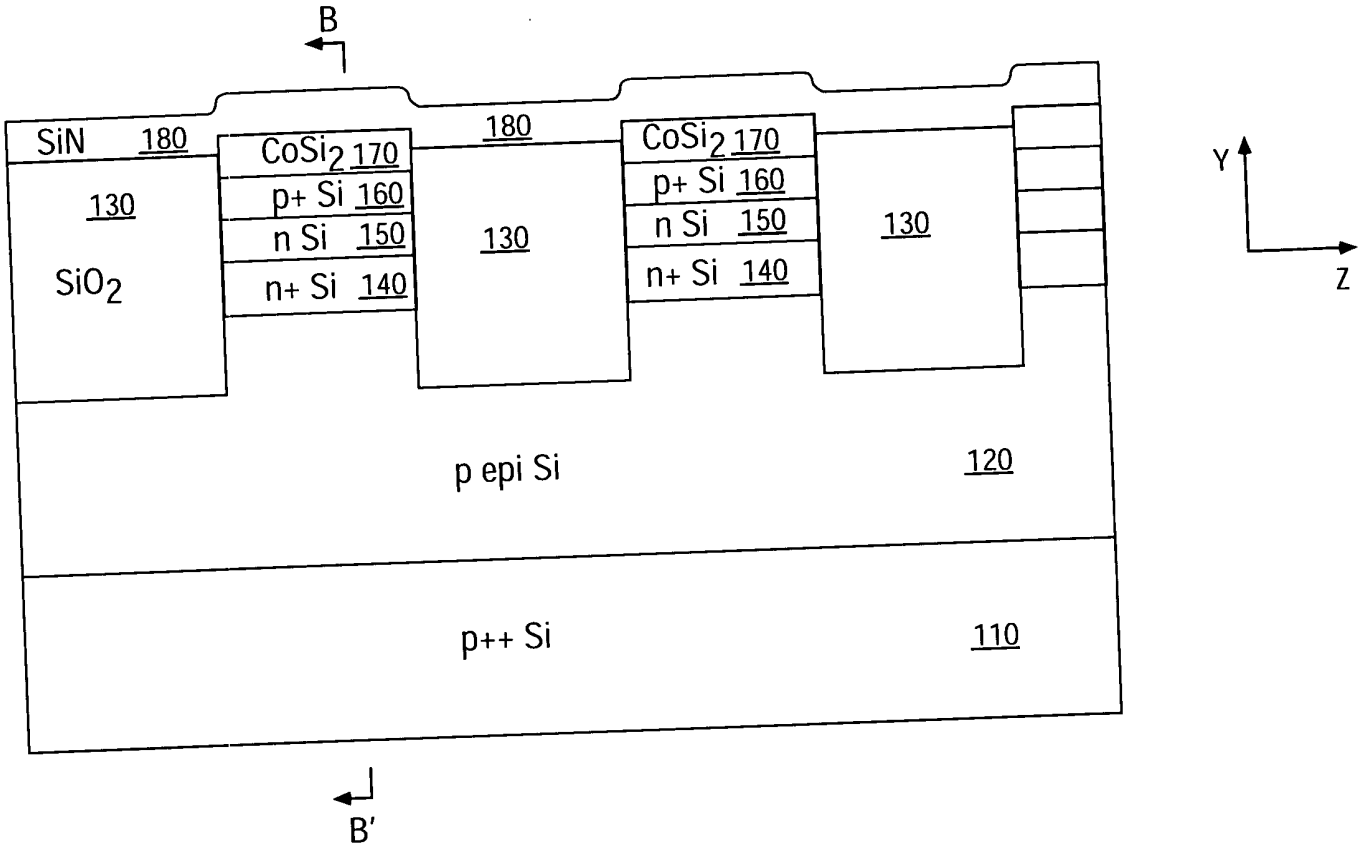
B
SiN 180
130
SiO2
CoSi2 170
p+ Si 160
n Si 150
n+ Si 140
180
130
CoSi2 170
p+ Si 160
n Si 150
n+ Si 140
130
p epi Si
120
p++ Si
110
B'
Y
Z

FIG. 4

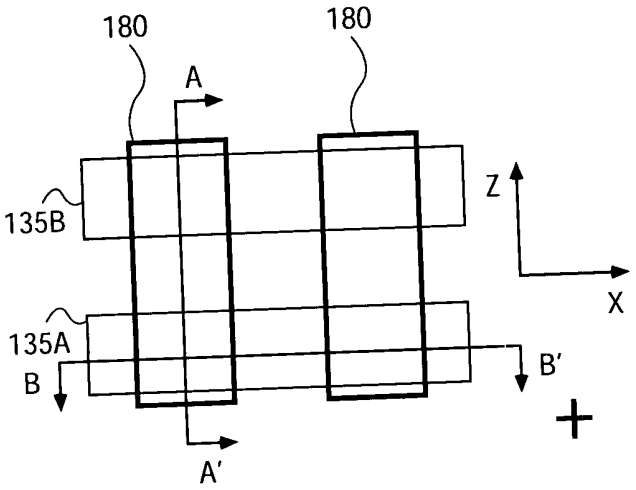
180
180
A
135B
Z
X
135A
B
B'
A'

FIG. 5

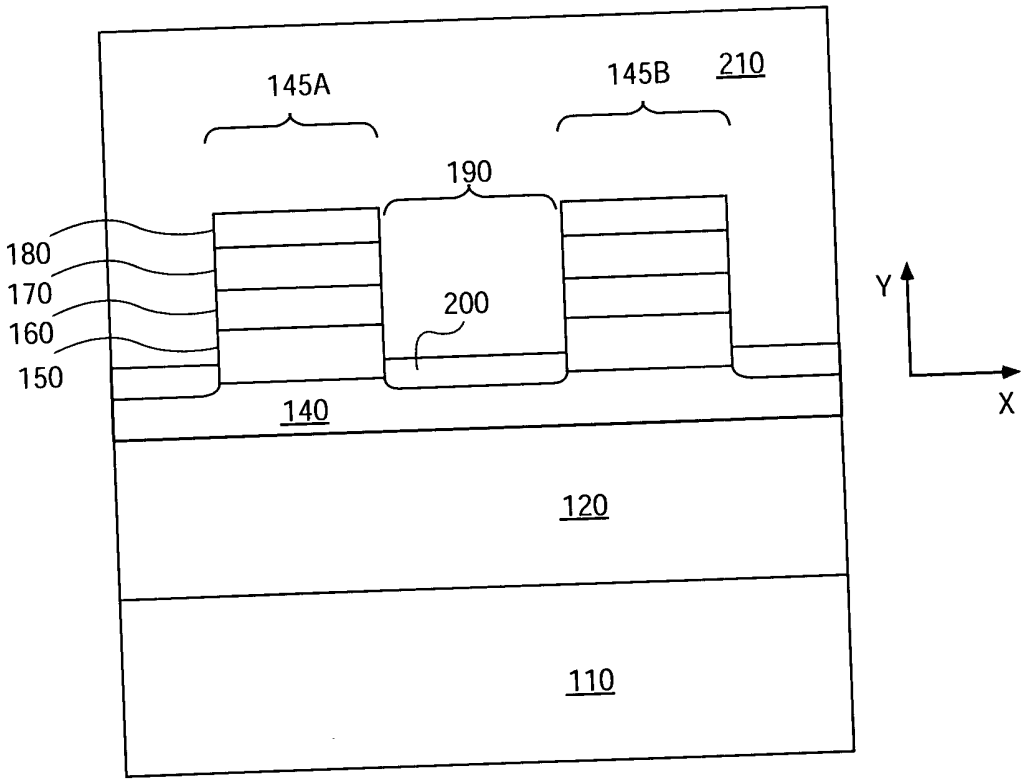
145A
145B
210
190
180
170
160
150
200
Y
X
140
120
110

FIG. 7

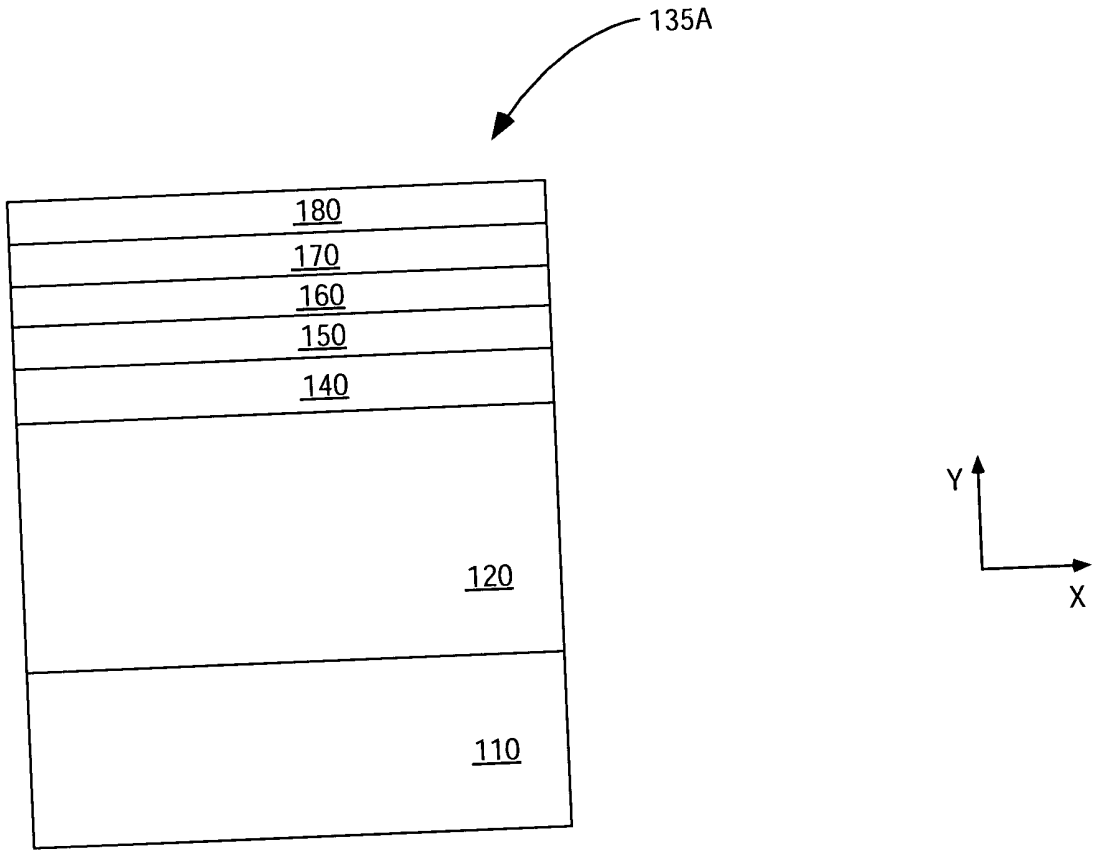

FIG. 6

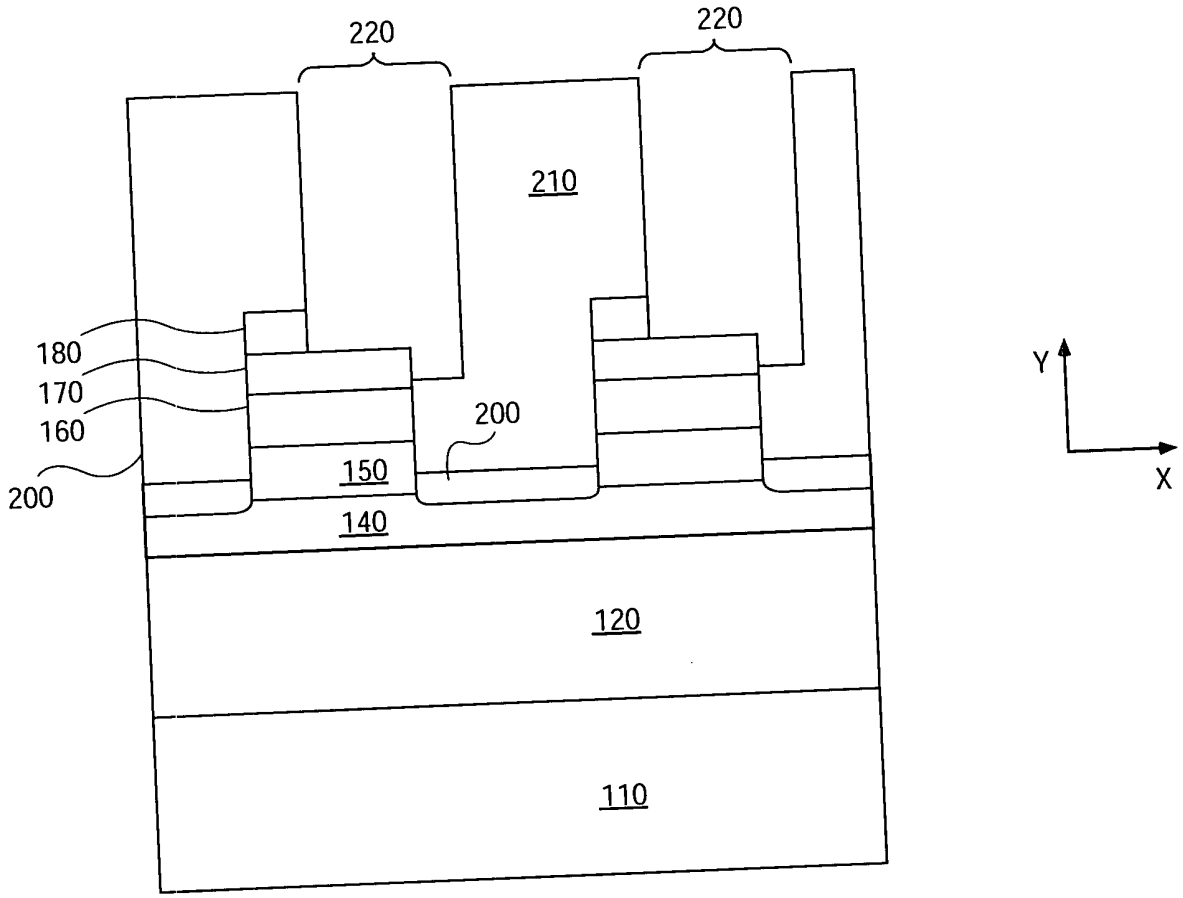

FIG. 8

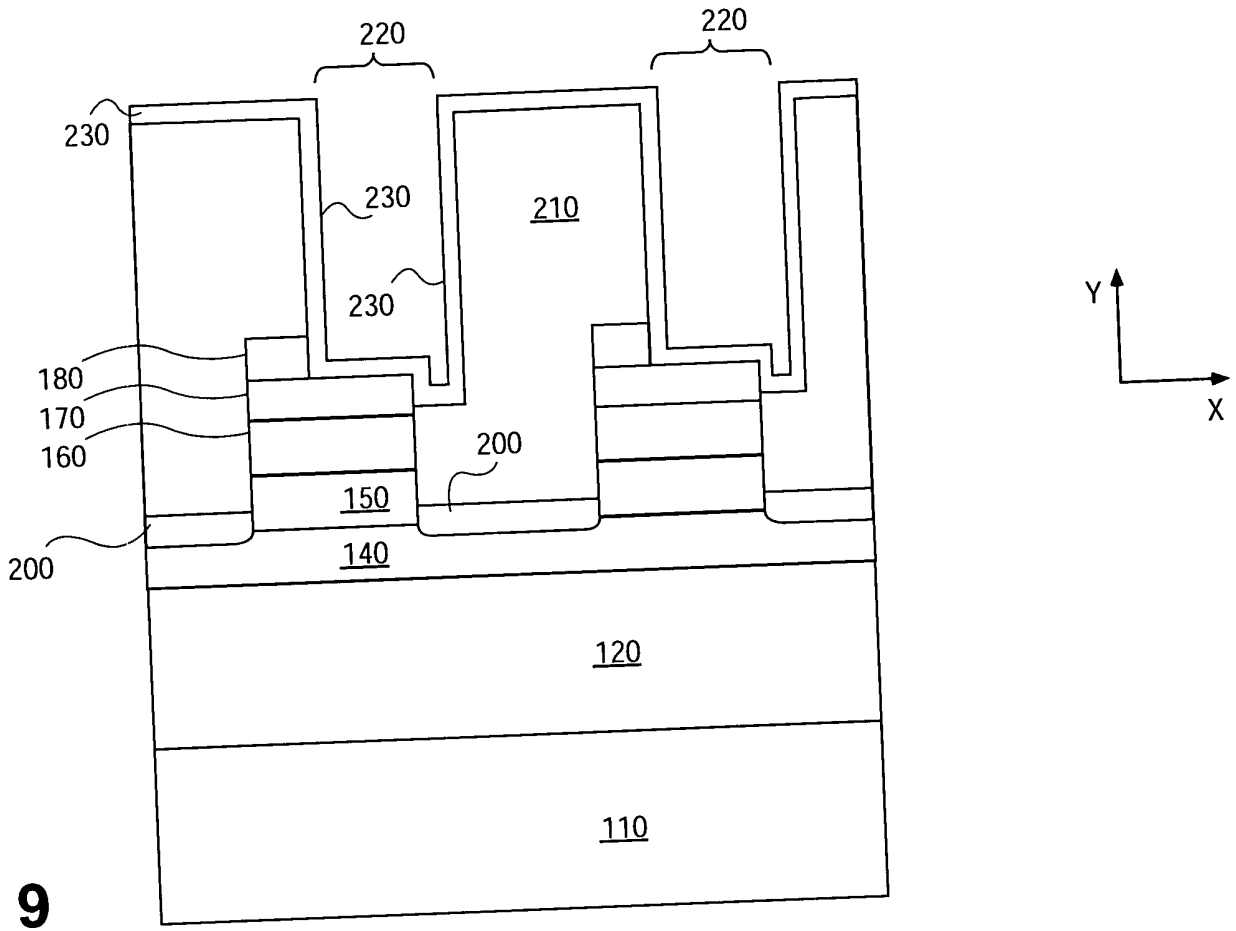

FIG. 9

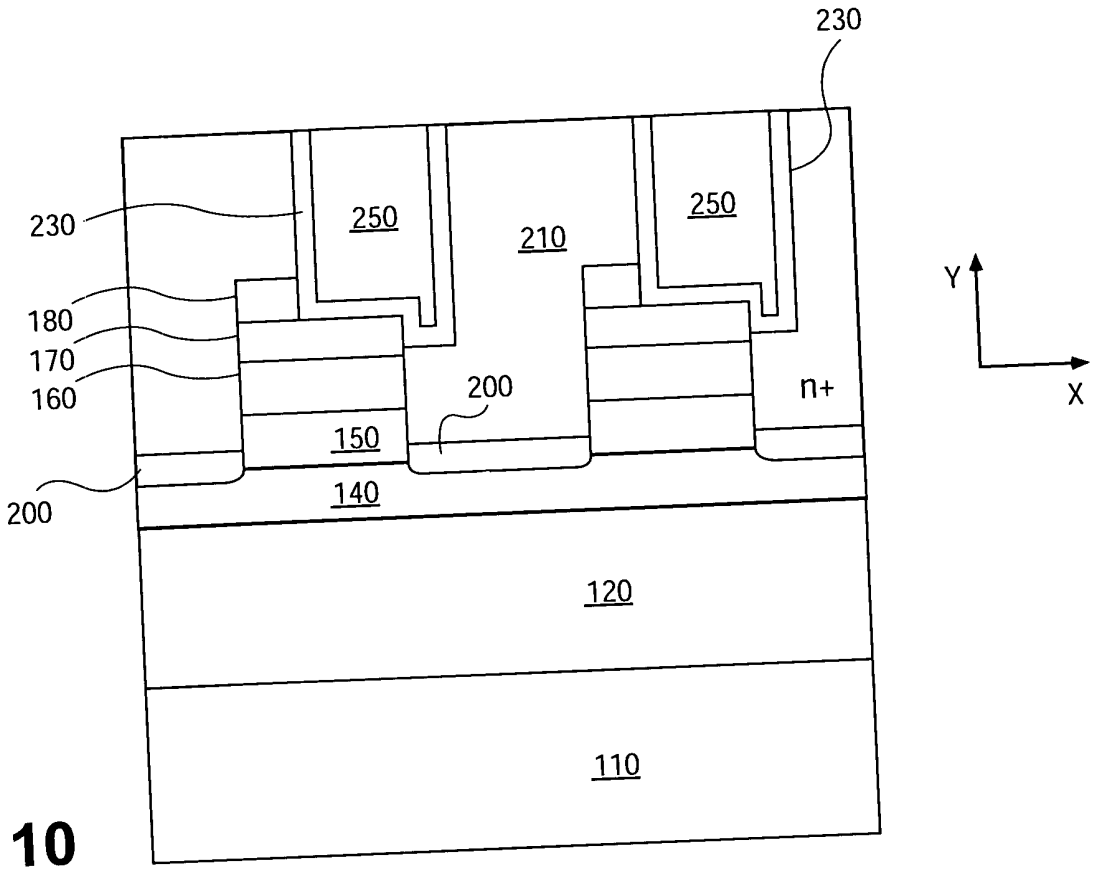

FIG. 10

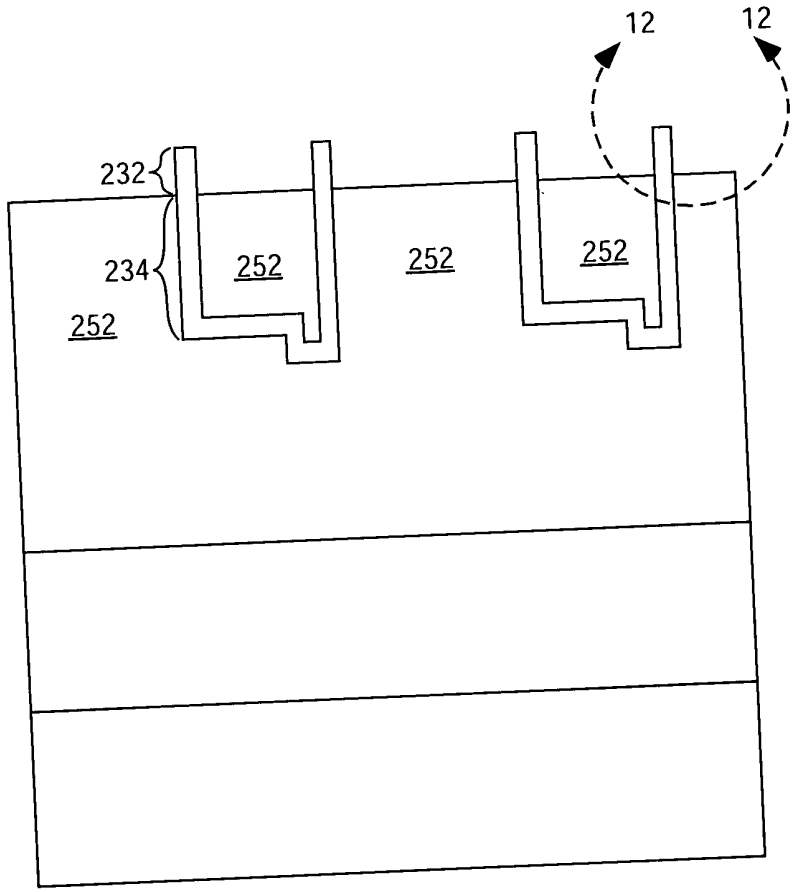

FIG. 11

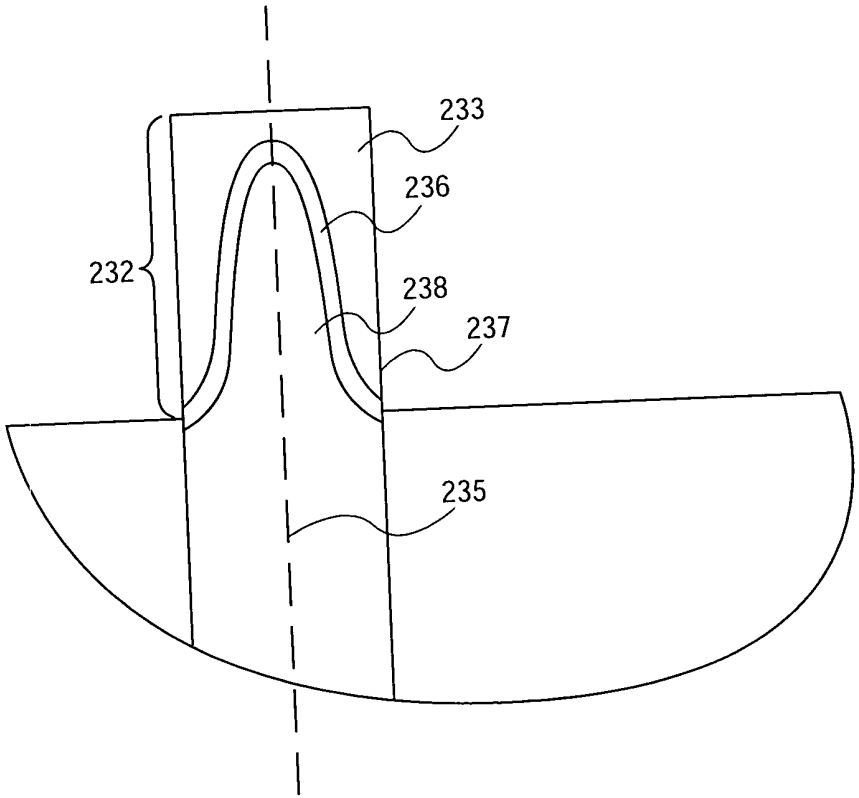

FIG. 12A

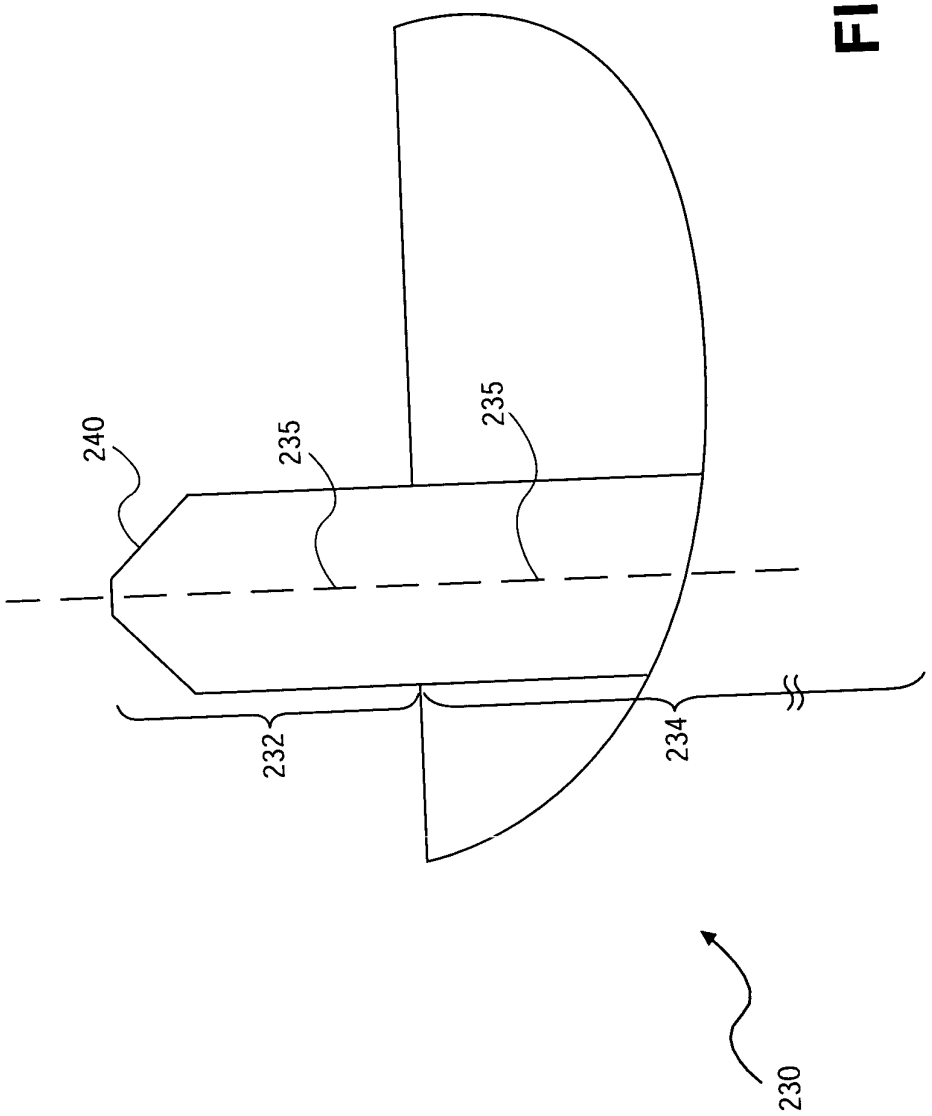

FIG. 12B

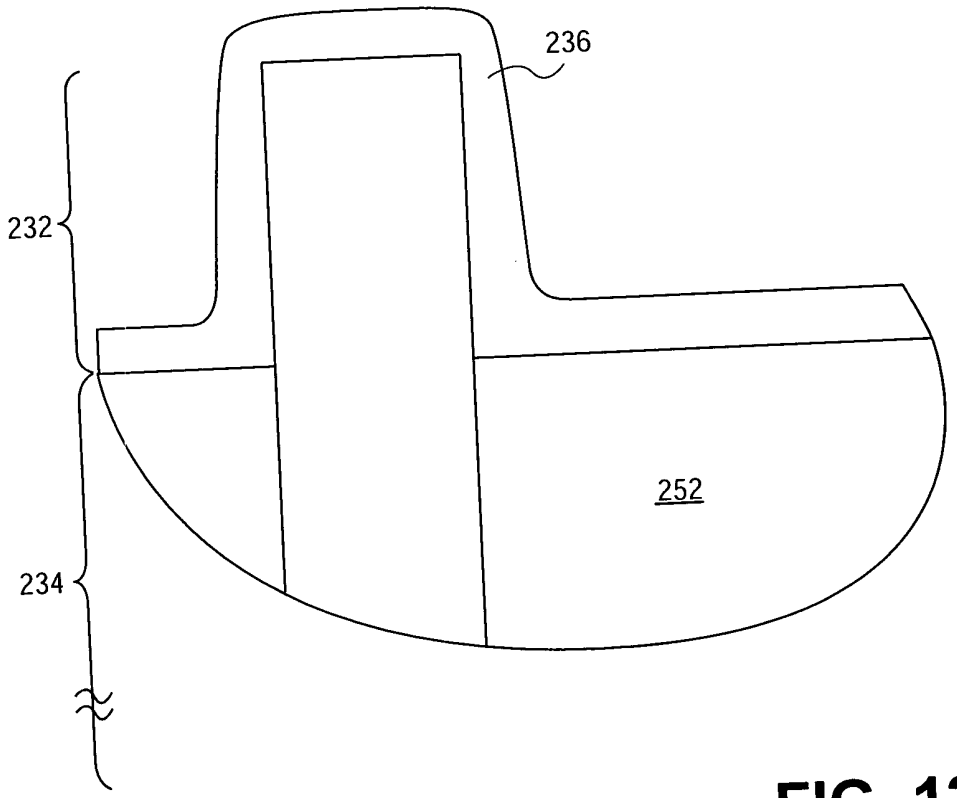

FIG. 12C

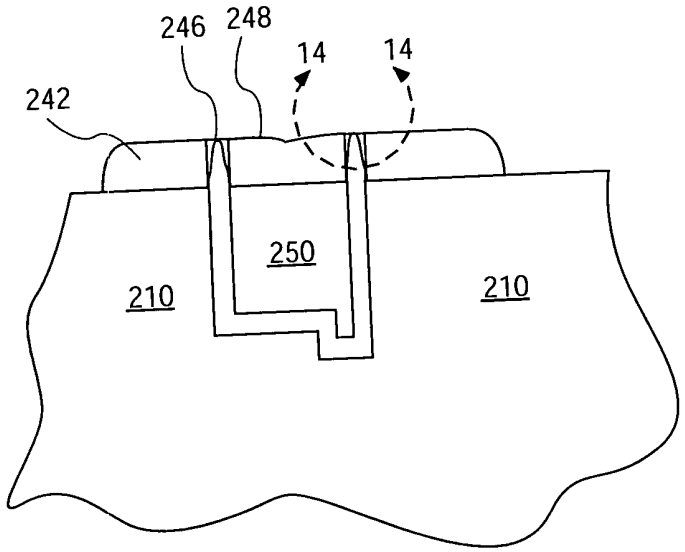

FIG. 13

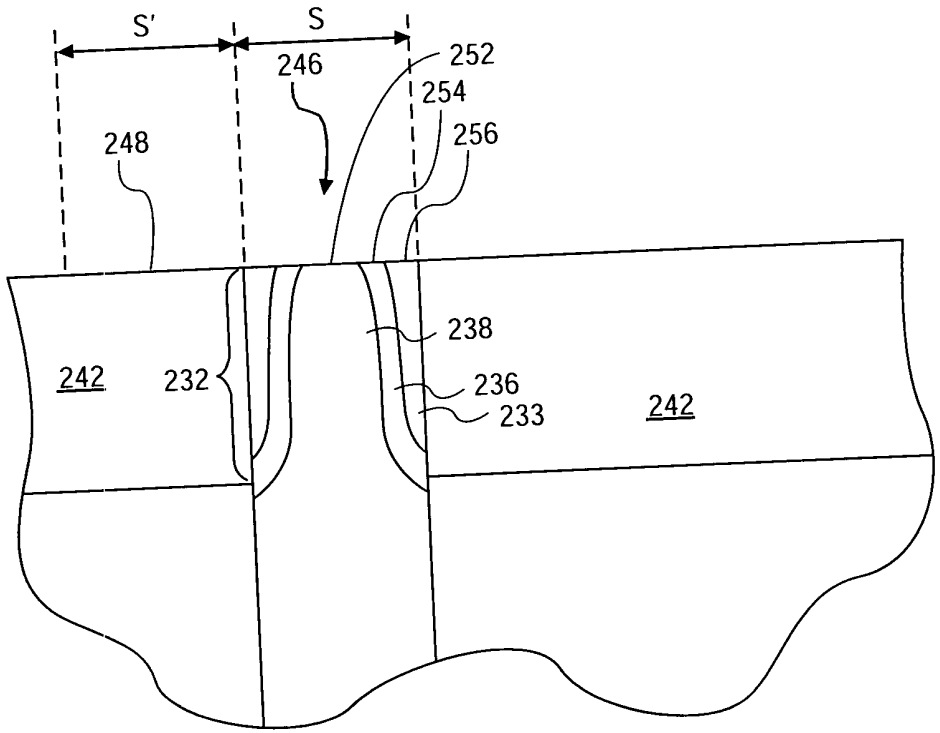

FIG. 14

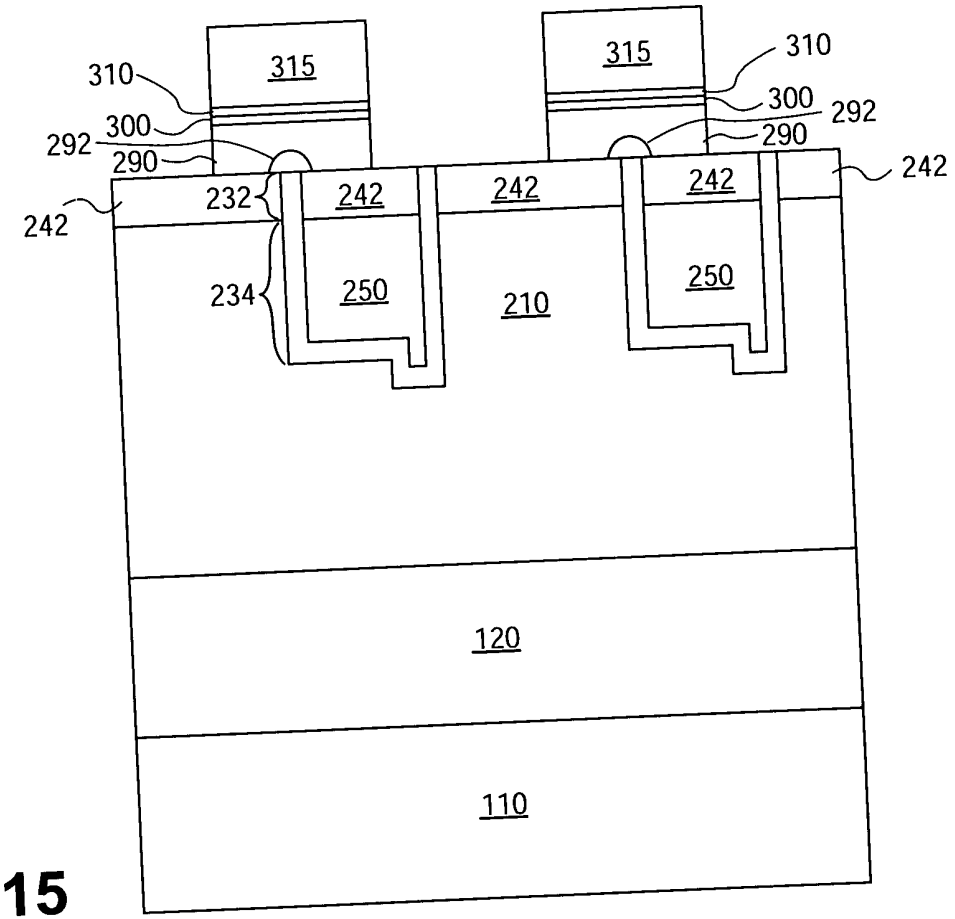
315
315
310
310
300
300
292
292
290
290
242
242
232
242
242
242
242
234
250
250
210
120
110

FIG. 15

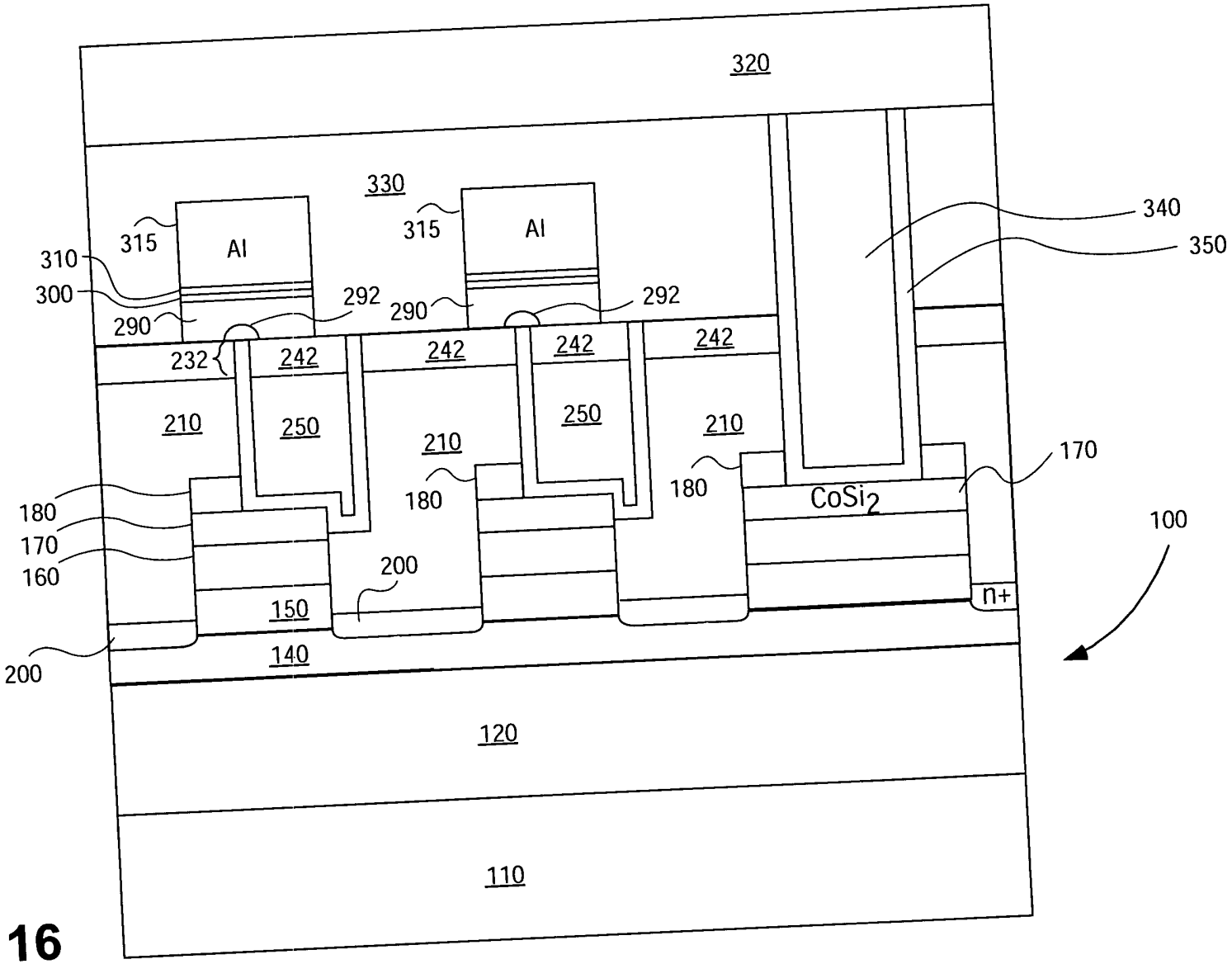
320
330
315
Al
315
Al
340
350
310
300
290
292
290
292
232
242
242
242
242
210
250
210
250
210
180
180
180
170
160
200
150
200
CoSi2
170
100
n+
140
200
120
110

FIG. 16

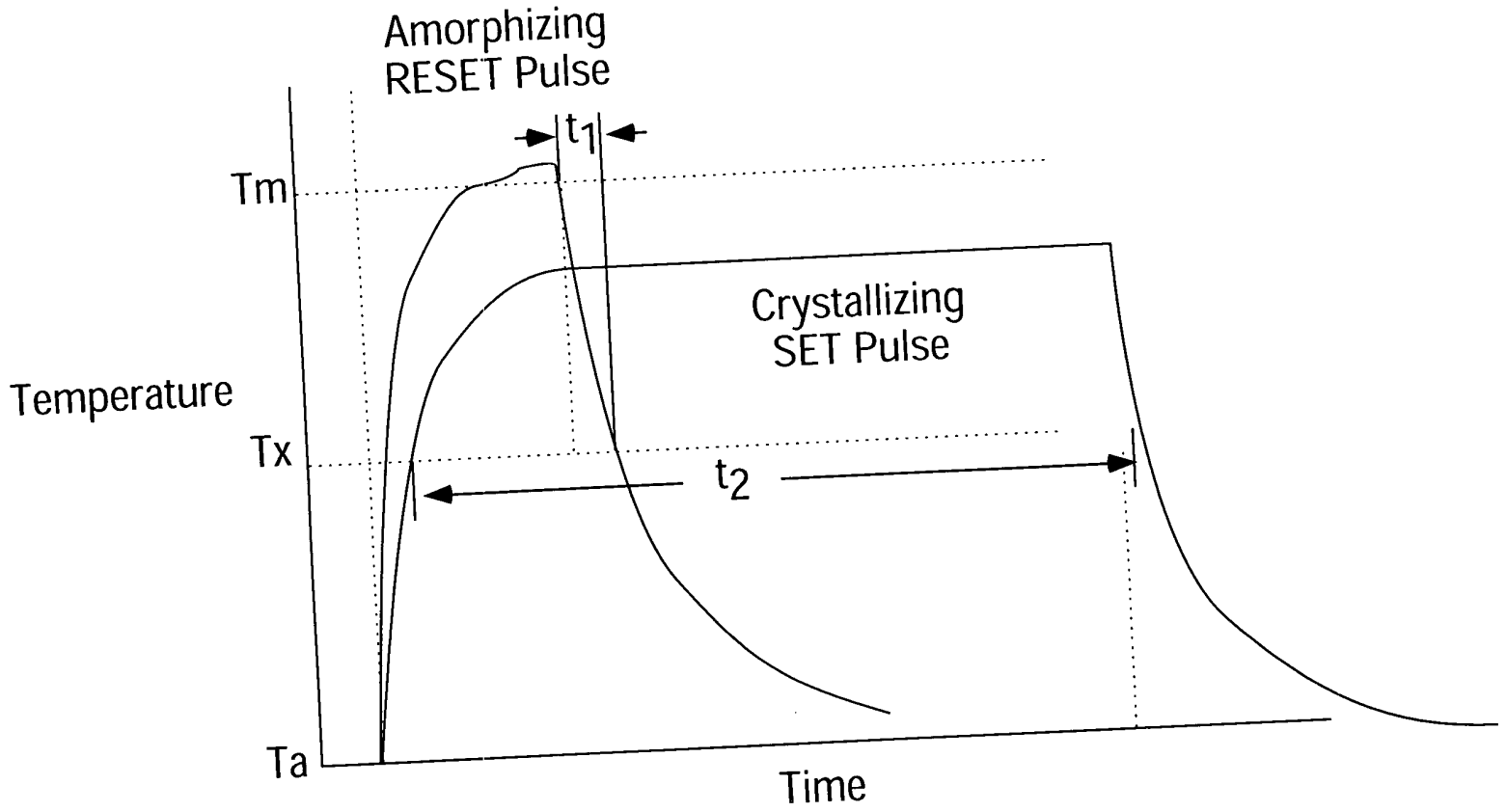
Amorphizing
RESET Pulse
t_1
Tm
Crystallizing
SET Pulse
Temperature
Tx
t_2
Ta
Time

FIG. 17